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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/682,531	09/17/2001	Abbas Raftari	201-0532 KAV	5609

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EXAMINER

KOBERT, RUSSELL MARC

ART UNIT PAPER NUMBER

2829

DATE MAILED: 04/23/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

• Office Action Summary

Application No.

09/682,531

Applicant(s)

RAFTARI ET AL.

Examiner

Russell M Kobert

Art Unit

2829

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 17 September 2001.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-20 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-20 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 2,3,4,5.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

Art Unit: 2829

1. In the Cross Reference to Related Applications, the serial numbers, filing dates and prosecution status of each Related Application is not listed. It is requested that Applicants amend this in the specification to reflect the associated Application.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being anticipated by Abbott et al (3947764).

Abbott et al anticipates, a device for detecting faults due to permanent magnet degradation in a motor in a vehicle comprising: a permanent magnet induced voltage monitor that measures a detected permanent magnet induced voltage of the motor at a predetermined speed; and a processor that: compares the detected permanent magnet induced voltage with a reference voltage that reflects a permanent magnet induced voltage of the motor with a fully magnetized permanent magnet at the predetermined speed; and analyzes the detected permanent magnet induced voltage with reference to the reference voltage to determine whether a characteristic of the detected permanent magnet induced voltage indicates a component of the motor is faulty (col 3, ln 19-32); as recited in claim 1.

Art Unit: 2829

As to claim 2, the permanent magnet induced voltage monitor comprises coils on a stator of the motor and a voltmeter coupled to the coils to detect the detected permanent magnet induced voltage is disclosed (col 1, ln 62 – col 2, ln 21).

As to claim 3, the processor analyzes the detected permanent magnet induced voltage with reference to a point of synchronization that relates to a position of a permanent magnet in the motor is considered an inherent characteristic of Abbott et al.

As to claim 4, the point of synchronization is caused by a predetermined irregularity in the motor is considered an inherent characteristic of Abbott et al.

As to claim 4, the predetermined irregularity is formed in one of a rotor and a permanent magnet is further a characteristic of Abbott et al.

As to claim 6, the point of synchronization is caused by a predetermined change in one of motor reluctance and magnetic strength, is considered an inherent characteristic of Abbott et al.

A method for identifying a component that is faulty and causing permanent magnet degradation in a motor of a vehicle, the method comprising the steps of: detecting a first signal that is a function of permanent magnetization of a plurality of permanent magnets in the motor; comparing the first signal with a reference signal that represents a function of permanent magnetization of the plurality of magnets in the motor, wherein the reference signal reflects a level of magnetization that is expected where the plurality of permanent magnets in the motor are fully magnetized; and analyzing a difference between the first signal and the reference signal to determine a

Art Unit: 2829

faulty component that is likely causing the difference (col 3, ln 33 – col 4, ln 26); as recited in claim 7.

As to claim 8, the step of: setting a diagnostic code indicating the faulty component is considered an inherent characteristic of Abbott et al.

As to claim 9, the first signal is a permanent magnet induced voltage and the reference signal is a permanent magnet induced voltage is considered an inherent characteristic of Abbott et al.

As to claim 10, the first signal includes a point of synchronization and the reference signal includes a point of synchronization is considered an inherent characteristic of Abbott et al.

As to claim 11, the point of synchronization of the first signal is determined by a predetermined irregularity in the motor is considered an inherent characteristic of Abbott et al.

As to claim 12, the predetermined irregularity causes a change in one of motor reluctance and magnetic strength is considered an inherent characteristic of Abbott et al.

As to claim 13, the first signal is detected by inducing a voltage in a coil adjacent a stator of the motor is considered an inherent characteristic of Abbott et al.

Abbott et al anticipates a device for identifying a component that is faulty and causing permanent magnet degradation in a motor of a vehicle, the device comprising: a processor that: receives a first signal that is a function of permanent magnetization of a plurality of permanent magnets in the motor; compares the first signal with a reference

Art Unit: 2829

signal that represents a function of permanent magnetization of the plurality of magnets in the motor, wherein the reference signal reflects a level of magnetization that is expected where the plurality of permanent magnets in the motor are fully magnetized; analyzes a difference between the first signal and the reference signal to determine a faulty component that is likely causing the difference (col 3, ln 19-32); as recited in claim 14.

As to claim 15 the processor setting a diagnostic code indicating the faulty component is considered an inherent characteristic of Abbott et al.

As to claim 16 the first signal is a permanent magnet induced voltage and the reference signal is a permanent magnet induced voltage is considered an inherent characteristic of Abbott et al.

As to claim 17, the first signal includes a point of synchronization and the reference signal includes a point of synchronization is considered an inherent characteristic of Abbott et al.

As to claim 18, the point of synchronization of the first signal is determined by a predetermined irregularity in the motor is considered an inherent characteristic of Abbott et al.

As to claim 19, the predetermined irregularity is formed in one of a rotor and a permanent magnet of the plurality of permanent magnets is considered an inherent characteristic of Abbott et al.

As to claim 20, the first signal is detected by inducing a voltage in a coil adjacent a stator of the motor is considered an inherent characteristic of Abbott et al.

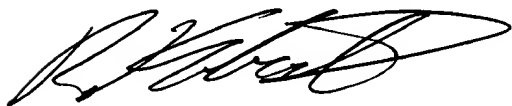
Art Unit: 2829

4. Claims 1-20 are rejected under 35 U.S.C. 102(b) as being clearly anticipated by Horvath et al (5751132) or Lebsock (4967123).

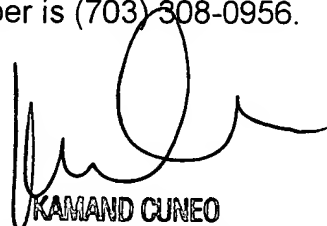
5. A shortened statutory period for response to this action is set to expire three month(s) from the date of this letter. Failure to respond within the period for response will cause the application to become abandoned. 35 U.S.C. 133

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Russell Kobert whose telephone number is (703) 308-5222.

Any inquiry of a general nature or relating to the status of this application should be directed to the Group receptionist whose telephone number is (703) 308-0956.



Russell M. Kobert
Patent Examiner
Group Art Unit 2829
April 15, 2003



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